

Claims

1. A method for operating a steam power installation (1), whereby steam (D) generated in a boiler (3) is condensed in a condenser (7) after flowing through at least one turbine (5), and the condensate (K) obtained is preheated and fed back to the boiler (3) as feed-water (S),
5 characterized in that the condensate (K) is divided for condensate preheating into a first partial flow (K₁) and a second partial flow (K₂), only the first partial flow (K₁) being preheated, and the second partial flow (K₂) being remixed with the preheated first partial flow (K₁).
2. The method as claimed in claim 1,
15 characterized in that the first partial flow (K₁) is preheated with bleeder steam (A₁,A₂) from the turbine (5).
3. The method as claimed in claim 1 or 2,
characterized in that the first partial flow (K₁) is preheated
20 in at least two stages (9A,9B).
4. The method as claimed in claim 1, 2 or 3,
characterized in that a preheat temperature (T_S) of the boiler
feed-water (S) of 210 °C to 250 °C, in particular 220 °C to
25 240°C, is set for the mixing of the partial flows (K₁, K₂).
5. The method as claimed in one of the preceding claims,
characterized in that the first partial flow (K₁) and the
second partial flow (K₂) are divided in the ratio 0.4 to 0.8,
30 in particular in the ratio 0.6 to 0.7.

6. The method as claimed in one of the preceding claims, characterized in that the division of the partial flows (K_1 , K_2) is controlled or regulated.

5 7. The method as claimed in one of the preceding claims, characterized in that after the mixing of the partial flows (K_1 , K_2), the mixture is fed as boiler feed-water (S) to a fossil-fired steam generator.

10 8. A steam power installation (1) for implementing the method as claimed in one of the preceding claims, comprising a boiler (3) for generating steam (D), at least one turbine (5), a condenser (7) connected on the steam outlet side of the turbine (5), a condensate line (13) for feeding the 15 condensate (K) back to the boiler (3), and a preheating device (15) connected in the condensate line (13) for preheating condensate (K), characterized in that a bypass line (17) bypassing the preheating device (15) is provided so that the preheating 20 device (15) only receives a first partial flow (K_1) of the condensate (K).

9. The steam power installation as claimed in claim 8, characterized in that the preheating device (15) is connected 25 to the turbine (5) via a bleeder line (19A,19B).

10. The steam power installation as claimed in claim 8 or 9, characterized in that the bypass line (17) has a control valve (21) for regulating a second partial flow (K_2) of the 30 condensate (K) that bypasses the preheating device (15).

11. The steam power installation as claimed in claim 8, 9 or 10,

characterized in that the bypass line (17) flows into the condensate line (13) downstream of the preheating device (15).

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12. The steam power installation as claimed in one of the claims 8 to 11,

characterized in that the preheating device (15) has at least one heat exchanger (23A, 23B), in particular a high-pressure preheater.

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13. The steam power installation as claimed in one of the claims 8 to 12,

characterized in that a diversion line (27) that can be activated by a quick-shutoff fitting (25) is connected in 15 parallel with the preheating device (15).